

# **THOMSON CONSUMER ELECTRONICS**

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July 17, 1997

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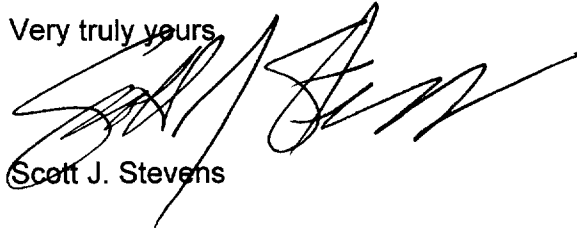
**FCC MAIL ROOM**

William Caton  
Office of Secretary  
Federal Communications Commission  
1919 M Street NW  
Washington, DC 20554

Dear Mr. Caton:

Enclosed please find for filing with the Commission an original and nine copies of the Response of Thomson Consumer Electronics, Inc. to Petitions for Reconsideration with respect to MM Docket No. 87-268.

Very truly yours,



Scott J. Stevens

SJS:jrg

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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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**FCC MAIL ROOM**

In the Matter of	)	
	)	
Advanced Television Systems and	)	MM Docket No. 87-268
Their Impact Upon the Existing	)	
Television Broadcast Service	)	

RESPONSE OF  
THOMSON CONSUMER ELECTRONICS, INC.  
TO PETITIONS FOR RECONSIDERATION

Thomson Consumer Electronics, Inc. ("Thomson") would like to submit the following comments in response to Petitions for Reconsideration of the Fifth Report and Order and the Sixth Report and Order adopted by the Federal Communications Commission ("Commission") in the above-captioned proceeding.

Thomson hails the Commission for its action taken in the Fifth Report and Order and the Sixth Report and Order in adopting rules for the implementation of digital television service ("DTV") in the United States. Thomson believes that DTV will be strongly embraced by consumers, who will see significant improvements in both performance and viewing options. Thomson welcomes the advent of this technology and is moving quickly to provide DTV receivers in the marketplace in anticipation of the initiation of DTV broadcasting.

A number of parties, however, have petitioned the Commission to adopt mandatory minimum performance standards for DTV receivers, including criteria related to noise figure and tuner performance. Thomson believes that the adoption of these standards are unnecessary and may in fact act to compromise the overall performance of DTV receivers. Thomson fully supports the Response of the Electronic Industries Association and the EIA Advanced Television Committee to these Petitions. In their response, the EIA and the ATV Committee clearly state that such standards are unnecessary, correctly arguing that competitive market dynamics will ensure that DTV receiver manufacturers will produce sets that fully satisfy the performance demands of the marketplace, just as these market dynamics have worked to ensure the availability of high performance analog receivers that meet or exceed the consumer's expectations today.

As stated above, Thomson believes that there is no need for the Commission to adopt mandatory performance specifications or standards for DTV receivers. In particular, Thomson objects to the request for the establishment of a 7 dB noise figure requirement. The performance parameters of noise figure, image rejection and cross modulation are all crucial for DTV receivers and are inter-related in the design process. Any mandated establishment of a noise figure value will emphasize this parameter at the expense of performance in the other areas.

Thomson believes that DTV receiver designers should have freedom to find the optimum balance between these parameters to satisfy the desires of the consumer market.

In fact, the importance of noise figure performance is reduced by the typical manner in which television receivers and other consumer electronics products are installed in modern households. These typical installations, which may include distribution networks for multiple TVs, VCRs, set top boxes, and the use of indoor antennas, experience signal path losses that may degrade signal quality unless a low noise amplifier is used at the antenna. The antenna amplifier will dominate the noise figure in these configurations. For example, a mast-mounted antenna amplifier establishes the system noise figure, overcomes the losses in the signal distribution system, and solves fringe reception problems.

Several design considerations presently employed by Thomson and other prospective DTV receiver manufacturers preclude tuner noise figure reduction as a solution to fringe reception problems. The establishment of a 7 dB mandatory noise figure requirement would cause a radical change in current DTV tuner design, unnecessarily burdening consumers with cost. Perhaps more importantly, the time required for tuner re-design could delay the availability of DTV receivers in the marketplace.

By way of explanation, a tuner's noise figure is a composite of many factors in the receiver's front end stages. Signal losses occur that limit the achievable noise figure because of the wide frequency coverage and selectivity that is required from a TV tuner. Therefore, the tuner's noise figure is considerably greater than the noise figure of the first RF amplifier. The total noise figure is dominated by losses incurred in designing for high selectivity over the wide TV tuning ranges, and cannot be solved solely through use of lower noise amplifier devices.

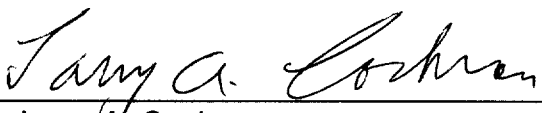
In addition, a design margin for manufacturing variability would be required in order to consistently meet a required noise figure value, which would add cost for all consumers as well as increasing the development time of the DTV receiver.

Thomson strongly believes that the best balance of receiver performance will be achieved by the consumer electronics industry competitive need meet customer's demands for high performance DTV receivers. It is recognized that DTV reception problems will sometimes occur that are caused by a consumer's proximity to broadcast stations, the in-home signal reception and distribution system utilized, and the DTV receiver performance. Competition in a free market will provide sufficient options to consumers for handling reception problems in the most expeditious manner. Such options will include a variety of antennas, antenna amplifiers, as well as well-designed optimized receivers.

Thomson strongly supports the Commission's action in establishing standards and timetables for DTV service and receivers. Thomson is committed to making well-engineered, high performance DTV receivers available to consumers as soon as possible. Thomson urges the Commission to reject the arguments of those petitioners who would ask for mandatory performance standards and to speedily adopt only those requirements necessary to promote a smooth and efficient transition to DTV.

Respectfully submitted.

THOMSON CONSUMER ELECTRONICS, INC.

By:   
Larry A. Cochran  
General Manager, Television and  
Video Product Development

July 18, 1997